Wrap-up

Get To The Point...SOA

- Service Orientation
  - Leans More Toward Business Orientation
- Enterprise Architecture
  - Leans More Toward Technology
- Both Bridge IT and Business
- Service Orientation Examines Relationship Between Business & IT
- Enterprise Architecture is a Set of Best Practices (Disciplines) for Building Business That Leverage IT Resources
- SOA Is Enterprise Architecture Oriented Toward Services:
  - "Broad Set of Rules and Practices That Govern and Evolution of Organizations That Leverage Business Resources as Services."

SOA Strategy

- Some Strategic Limitations of SOA
  - Business People Are Unfamiliar With The Power of SOA...Its Still Emerging
  - SOA Is Complex and Technical...Most Champions Are IT-based
- Start Small...Grow Deterministically
  - (Step 1) Begin With Small But Significant Project
    - Solve Specific Problem (Limited)
    - Build Service Orientation Acceptance With Management and SOA Acceptance With IT
  - (Step 2) Quickly Implement Broader SOA Initiatives – Cross Organizational
    - Build Shared Services
    - Force Enterprise To Work Out Organizational Issues
  - (Step 3) Enterprise Initiative
- Think In Terms of Enterprise From Beginning
  - Avoid Localized SOA Initiatives That Go In Different Directions – Yarn Ball!
- Master Architecture Plan Is Key To SOA Strategy
  - Level of Detail Important
    - Too Much: Analysis Paralysis
    - Too Little: Plagues Efforts With Redundant Efforts / Incompatibilities
  - Iteratively Build...Incorporate Lessons Learned

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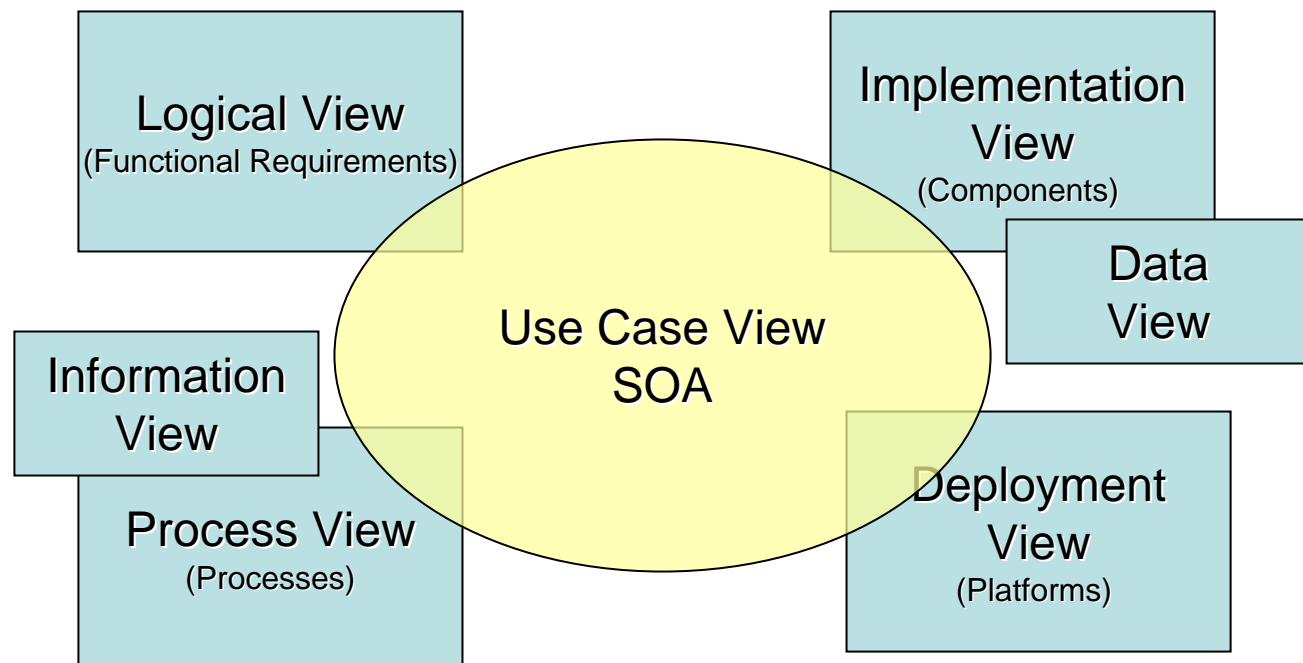
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View Model of SOA

Logical View
(Functional Requirements)

Implementation View
(Components)

Data View

Information View

Use Case View
SOA

Process View
(Processes)

Deployment View
(Platforms)

Two Notes:
1) Services Are The Crux of the Architecture
2) The Practice of SOA Centers on Services: How To Specify, How To Build, When To Use, How To Compose Into Process

Start Small = Pilot Project

- Pilot Projects Are Great For Safely Testing New Techniques & Technologies...SOA

- Pilots Are **NOT** Proof of Concepts
    - Both Are Trial Projects That Evaluate New Techniques & Technologies
    - Proof of Concepts Determines Worthiness of Concept for Future Efforts, But Doesn't Solve Business Problems
    - Pilot Determines Worthiness of Concept for Future Efforts and Actually Addresses A Business Problem

- Why Pilot SOA:
    - Build Acceptance For SOA
    - Work Through Challenging Aspects of Architecture and Planning Services
    - Technical Team Experience With SOA Intricacies
    - Fine-tune Methodologies and Techniques for Implementing SOA
    - Evaluation Technologies That Enable SOA

- Primary SOA Pilot Pitfall
    - Don't Forget The Architecture...You Are Piloting It!!!
    - May End Up With Old Architecture Warmed Up With Standard-based Interfaces

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SOA and Web Services

- SOA Pilot Pitfall
  - Pilot The SOA Architecture...not the Web Services.

- Isn't SOA and Web Services Synonymous?
  - NO!!!!
  - SOA is a Software Architecture. You Don't Have to Use Web Services to Accomplish SOA
  - Web Services are just ONE WAY of doing SOA

- SOA Pilots Address:
  - Architectural Planning, Modeling and Organization

- Web Services Pilots Address:
  - Implementing a Standards-based Interface.... I can give you a WS in 5 minutes!

- Why Am I Preaching?
  - Teams Often Abandon The Architecture Focus and Focus Building Services
  - Developing Architecture Best Practices is Hard Work
  - Becoming SOA-focused is a hard effort and will take TIME

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SOA Pilot Essentials

- Architecture Plan
  - SOA is an Enterprise Architecture Mapping How Business Interacts with IT
  - Must Put Some Subset of the Enterprise Through Its Paces

- Specific Scope
  - Start With Existing or Desired Business Process and Decompose to Identify Areas of Redundancy….These Lend Themselves Well To Services.
  - Scope A Reasonable Set of Services for the Pilot

- Clear Acceptance Criteria
  - How Do You Know When You Are Finished? How Do You Know It Was Successful?
  - Recommended Criteria:
    - A Complete Architectural Design: Design Should Extend the Broad Plan You Started with Service Contracts and Other Working Elements of a Working SOA Implementation
    - Reusable Business Services: Target Level of Reusability for the Services You Build, including the Number of Services and Number of Consumers per Service
    - Governance Criteria: Governance Infrastructure Provides Identities, Policies, and Rules for Ongoing Management / Evolution of the SOA Implementation

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Quick Discussion of Methodology

- Top-Down / Bottom-Up Planning
  - Top-down Planning
    - Assemble Long-term Architecture: View Model of SOA
    - Process Decomposition: Break Down Process, Identify Services, Detail Contracts for Services
    - Contracts Drive Development / Testing
  - Bottom-up Planning
    - Examine Current IT Resources To Be Exposed As Services (Techies Favorite)
    - Once Exposed, They Can Be Incorporated Into Business Process
  - SOA Approach Uses Both

- Incremental Approach
  - Top-down Planning: Recommend Building Services Too Complex
  - Bottom-up: Develop Services You Don't Need or Don't Solve Business Problems
  - First, Dive Into Process Decomposition and Services Definition Activities
  - Circle Back, Improve the Plan....Revisit The Processes and Services

- SOA in Its Vary Nature is Iterative!
  - Implementation in Constant State of Flux...Because Business is!

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What Does This All Mean?

- Service Orientation **will** impact Business as much as we saw in the 1990s... it will also take a Bit Longer

- It is **inevitable**

- Most companies are **on the road** to service orientation... although most of the effort is still in IT

- Are you skeptical?

- It's a Paradigm Shift
  - There Have Been Others...
    - The Personal Computer...
    - The Internet... even my mother does email and web
    - The Man on the Moon...
    - England winning the World Cup...

Four Pillars of Service Oriented Development

- Pillar 1: Iterative Development

- Pillar 2: User Involvement

- Pillar 3: Contract-first Development

- Pillar 4: Refactoring

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Strategic SOA

Discuss

- Build Buy or Repurpose?

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Objectives – did we meet them?

- Introduce you to SOA thinking
- Help you understand the challenges as well as the benefits
- Gain a high level understanding of the technologies and approaches
- Make you think
  - About how SOA fits with Iowa and your organization
  - About how you can apply SOA thinking and models
- Look at how SOA fits with Governance
- Not a sales pitch – a balanced view of the world

Feedback

- What was good about the day?

- What wasn't good?

- What could we do better?